

# Kevin Wandke

wandke2@illinois.edu

## EDUCATION

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### University of Illinois, Urbana-Champaign

*MS-PhD Electrical Engineering*

GPA 3.9

*May, 2019 – May 2023*

### University of Illinois, Urbana-Champaign

*B.S. Mechanical Engineering*

GPA 3.9

*August 2015 – May 2019*

## RESEARCH INTERESTS

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Soft Robotic Modeling and Control  
Nonlinear Dimensionality Reduction  
Adaptive Control  
Hyperelastic Material Modeling

## EXPERIENCE

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### Graduate Research Assistant

*University of Illinois, Urbana-Champaign*

May 2019 – Present

*Advisor: Yang Zhang*

- PhD Thesis: Nonlinear Dimensionality Reduction for Numerical Simulation of Soft Robotic Dynamics
- Master's Thesis: Modeling Hyper-elastic Soft Robots in MOOSE
- First Year Project: Closed Loop Control of 2 Degree of Freedom Soft Robots

### Edison Engineer Intern

*GE Global Research Center*

June 2020 – August 2020

*Niskayuna, NY*

- Developed model registration and toolhead localization tools for on-wing maintenance of GENX engines
- Integrated localization and kinematic data to build tool head trajectory generator and controller
- Developed prototype wind turbine internal repair robot

### Entrepreneurial Lead

*NSF National Innovation Corps*

January 2020 – March 2020

*Los Angeles, CA*

- Conducted 100 interviews to assess if soft robotic technologies could be commercialized
- Developed entrepreneurship skills and presentation ability

### SULI Intern

*Argonne National Laboratory*

June 2018 – August 2018

*Lemont, IL*

- Built soft robotic teleoperation system for nuclear decommissioning and disposal
- Developed soft liquid metal strain gauges
- Improved existing soft robotic gripper design

### Mechanical Engineering Intern

*Richardson Electronics*

June 2016 – August 2016

*LaFox, IL*

- Developed high-fidelity leak detection procedures for medical imaging equipment
- Designed fixtures for fabrication and testing of X-ray tube components

## HONORS

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Olsen Award for Excellence in Undergraduate Education (2019)

Chanellor's Scholar(2015-2019)

Department of Mechanical Engineering Outstanding Student Scholarship(2015-2019)

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, Matlab

**Software:** MOOSE, Solidworks, ROS

**Hardware:**Soft Robotic Fabrication, Mechanical Design